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10/580,702	02/20/2007	Thomas C. Linnemann	03850/029001	5410

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EXAMINER	
AMAKWE, TAMRA L	

ART UNIT	PAPER NUMBER
1785	

NOTIFICATION DATE	DELIVERY MODE
12/28/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/580,702	LINNEMANN ET AL.	
	Examiner	Art Unit	
	TAMRA L. AMAKWE	1785	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 October 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5, 79-97, 111-112* is/are pending in the application.

4a) Of the above claim(s) *1-4* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5,79-97,111 and 112* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/22/2007,02/20/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 1-4 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/8/10. Applicant traversal is on the ground that a metalized layer is not present in the current claim 5, among other arguments to how the Examiner could examine. The arguments are not found persuasive, however, because pressing a supporting substrate of claim 5 is a step that is not in claims 1-4, thus claim 5 is distinct and separate from claims 1-4. Claims 1-4 all have different steps of drying or pressing. For instance, in claim 3, the extra step of pressing the decorative layer is not in claim 1. The drying step of claim 1 is not in claims 3 or 4-5. The wax being more than about 50 degrees C below the press temperature in claim 4 is not in claim 3. The order of the method of making the products are all in different orders which may result in different affects or embodiments, despite Applicant's arguments to the contrary. Therefore, the requirement is still deemed proper and is therefore made FINAL.

Specification

The disclosure is objected to because of the following informalities: "colorimetry" is misspelled in the context of the sentence, the "C" in "DSC" stands for Calorimetry, not colorimetry. See Applicant's instant specification on page 8, lines11-15.

Appropriate correction is required.

Claim Objections

Claim 96 is objected to because of the following informalities: Fisher is misspelled. It should be Fischer. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 79-97, and 111-112 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5, 79-97, and 111-112 are indefinite. Claim 5 recites "the supporting substrate" lacks antecedent basis. Thus it is not clear what the structure is.

Claim 85 is indefinite. The open ended ranges are conflicting and thus it is not clear what the water content range is. See MPEP 2173.05(c).

Claim 96 is indefinite. It is not clear what a "Fischer-Tropsch-Wax" is. If it is a process, the claim should state the wax is made according to the process. If it is a trademark, the claim should refer to it in generic terms.

Claims 5, 79, 81, 83-84, 88, 90-92, 94-95, 97, and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0024637 to Min in view of US 4,532,170 to O'Dell.

Re claim 5: Min teaches a method for producing a decorative laminate board, comprising: providing a decorative layer (see [40]), applying a mixture comprising a thermohardening synthetic resin and hard particles to the decorative layer (see [54], melamine and alumina, respectively).

Min doesn't teach applying at least one wax to the decorative layer or to the mixture.

O'Dell teaches at least one wax to the decorative layer or to the mixture. See lubricant solid wax particles in 4:5-15, 4:39-60, and 5:20-41. The wax is in a coating composition, mixed with melamine or polyester applied on or impregnated in paper in decorative laminates that aids in scuff resistance. See at least 3:50-68, 5:25-30.

It would have been obvious to one having ordinary skill in the art to have modified the composition of Min to include wax in the decorative layer because O'Dell teaches it aids in scuff resistance.

Min teaches pressing a supporting substrate (see backing in [26]), the decorative layer, and the mixture in a hot press at a press temperature to form a decorative laminate board.

Min doesn't teach the wax in a hot press at a press temperature to form a decorative laminate board.

O'Dell teaches wax in a hot press at a press temperature to form a decorative laminate board. See press temperature 260-300 degrees F (127-148 degrees C) in Example 1, (7:40-45) for scruff resistance.

It would have been obvious to one having ordinary skill in the art to have modified Min to include wax in a hot press at a press temperature because Min teaches pressing in a hot press and O'Dell teaches doing so at said temperature which results in a slick surface and does not scruff.

Min doesn't teach a melting range of the at least one wax is at least one of below a temperature of about 140°C and by more than 50°C below the press temperature.

O'Dell teaches a melting range of the at least one wax is at least one of below a temperature of about 140°C. See wax melting points of 60 degrees C (140 degrees F) and 110 degrees C (215 degrees F) -8:44-49, Examples I-III.

It would have been obvious to one having ordinary skill in the art to have modified the composition of Min to include a wax melting in a range below 140 degrees C because O'Dell teaches this range for wax in the composition to aid in scruff resistance.

Re claim 79: Min doesn't teach the melting range is by more than 60°C lower than the press temperature.

O'Dell teaches melting point range of 60 degrees C (140 degrees F in Example II) and a press temperature of 260-300 degrees F (127-148 degrees C) in Examples I-III, (7:40-45) for scruff resistance. 148 degrees C – 60 degrees C = 88 degrees C.

O'Dell's teaching of 60 degrees is less than 88 degrees, and thus the teaching of 60 degrees is more than 60 degrees lower (less than 88 degrees from 148 degrees C) than the press temperature (148 degrees C).

It would have been obvious to one having ordinary skill in the art to have modified Min to have the melting range as claimed because O'Dell teaches this range which aids in scruff resistance.

Re claim 81: Min teaches a pressure of the press is less than 50 bars. See 14.4 bars and 48 bars in [68, 72], Min.

Re claim 83: Min doesn't teach the at least one wax has a melting viscosity of less than 75 mPa.s at the press temperature.

O'Dell teaches a wax having a melting viscosity between 1500 to 2000 cps (1.5 Pa.s to 2 Pa.s). This range meets Applicant's less than 75 mPa.s. See Example I.

It would have been obvious to one having ordinary skill in the art to have modified Min to have at least one wax as claimed because O'Dell teaches a wax as claimed for reducing scuff resistance.

Re claim 84: Min teaches further comprising drying the decorative layer with the applied mixture before the pressing, See FIG. 4B.

Re claim 84: Min teaches doesn't teach drying at a drying temperature within a drying temperature range below the press temperature.

O'Dell teaches drying temperature at 140 degrees F (60 degrees C) at 6:15-20. O'Dell teaches this drying temperature range is below a press temperature 260 - 300 degrees F (127 degrees C to 148 degrees C) in Example I, 7:40-42.

It would have been obvious to one having ordinary skill in the art to have modified Min and the method of drying as claimed because O'Dell teaches this range suitable for scuff resistance.

Re claim 85: Min doesn't teach wherein the drying is carried out until a remaining water content is 7% at most, in particular at least 6%. However, because the drying step has no water left over, It would have been obvious to one having ordinary skill in the art to have modified the combination by meeting the drying recitation since it would include zero % water and thus is carried out until a remaining water content is 7% at most.

Re claim 88: Min doesn't teach during the drying, the drying temperature initially has an increasing temperature profile and thereafter a decreasing temperature profile.

O'Dell teaches a drying temperature at 140 degrees F (60 degrees C) minimum, see 6:15-20. O'Dell doesn't teach the profile as claimed.

However, it would have been obvious to one having ordinary skill in the art to have modified ,Min to include a drying temperature profile as claimed because both Min and O'Dell teach drying processes and both don't teach continually drying thus the laminate must cool after heat and thus the temperature decreases as claimed.

Re claim 97: Min doesn't teach wherein the at least one wax is comprised in the mixture in an amount of from 0.1 to 5 weight percent of the mixture.

O'Dell teaches one wax is comprised in the mixture in an amount of from 0.1 to 5 weight percent of the mixture. See 5:40-60 to amounts over 2.5% of wax affects the clarity and scuff resistance.

It would have been obvious to one having ordinary skill in the art to have modified Min to include wax in the mixture as required because O'Dell teaches it affects the clarity and scuff resistance.

Re claim 90: Min doesn't teach the application of the wax is carried out together with the application of the mixture.

O'Dell teaches at least one wax to the decorative layer or to the mixture. See lubricant solid wax particles in 4:5-15, 4:39-60, and 5:20-41. The wax is in a coating composition, mixed with melamine or polyester applied on or impregnated in paper in decorative laminates that aids in scuff resistance. See at least 3:50-68, 5:25-30.

It would have been obvious to one having ordinary skill in the art to have modified the composition of Min to include wax in the decorative layer because O'Dell teaches it aids in scuff resistance.

Re claim 91: Min doesn't teach the wax is a component of the mixture.

O'Dell teaches at least one wax to the decorative layer or to the mixture. See lubricant solid wax particles in 4:5-15, 4:39-60, and 5:20-41. The wax is in a coating composition, mixed with melamine or polyester applied on or impregnated in paper in decorative laminates that aids in scuff resistance. See at least 3:50-68, 5:25-30.

It would have been obvious to one having ordinary skill in the art to have modified the composition of Min to include wax in the decorative layer because O'Dell teaches it aids in scuff resistance.

Re claim 92: Min doesn't teach wherein the melting range of the wax is above 60°C.

O'Dell teaches wax melting range above 60 degrees C at 4:10-13 (150-285 degrees F, equivalent to 66 to 141 degrees C).

It would have been obvious to one having ordinary skill in the art to have modified Min to include wax as claimed in the decorative layer because O'Dell teaches it aids in scuff resistance.

Re claim 94: Min teaches the thermohardening synthetic resin is a melamine resin. See [38, 54].

Re claim 95: Min teaches the hard particles are aluminium oxide particles. See alumina, [38].

Re claim 111: Min teaches arranging the decorative layer on a supporting substrate, see backing layer 11, [26] and substrate 10, Fig. 2.

Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0024637 to Min in view of US 4,532,170 to O'Dell as applied to claim 5 above, and further in view of US 20050186399 to Taylor.

Re claim 80: Min doesn't teach a dwell time in the press is from about 4 to 60 seconds.

Taylor teaches a dwell time in the press is from about 4 to 60 seconds (15-20 seconds is taught in [25]) for melamine or polyester resins which is less than conventional in order to save manufacturing processing time used in high pressure decorative laminates.

It would have been obvious to one having ordinary skill in the art to have modified Min to have a dwell time as claimed because Taylor teaches it saves manufacturing processing time.

Claims 84, 87, and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0024637 to Min in view of US 4,532,170 to O'Dell, as applied to claim 5, and further in view of US 4,478,660 to Lander.

Re claim 84: Min teaches drying prior to pressing but doesn't teach all of the requirements of claim 84.

Landler teaches further comprising drying a decorative layer with an applied mixture before the pressing, See Example 6. Lander also teaches drying at a drying temperature of 140 degrees C within a drying temperature range below the press temperature of 180 degrees C. Polyacrylate is used with crosslinking agents (2:1-45). See Example 6.

It would have been obvious to one having ordinary skill in the art to have modified the combination to include the drying steps as claimed because Lander teaches these steps result in a decorative laminate without air bubbles.

Re claim 87: Min doesn't teach the drying ranges as required by the claim.

Lander teaches the drying temperature range is about 140°C to 190°C. Lander teaches drying at a drying temperature of 140 degrees C up to 160 degrees C. See Example 6.

It would have been obvious to one having ordinary skill in the art to have modified the combination to include the drying steps as claimed because Lander teaches these steps result in a decorative laminate without air bubbles.

Claims 82, 85-89 and 112 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0024637 to Min in view of US 4,532,170 to O'Dell, as applied to claims 5 and 84, and further in view of US 4,250,282 to Dorries.

Re claim 82: Min doesn't teach the press temperature is at least equal to or higher than a hardening temperature suitable for hardening the at least one synthetic resin.

Dorries teaches the press temperature is at least equal to or higher than a hardening temperature suitable for hardening the at least one synthetic resin. See 8:24-26 to a press and curing temperature of 180 degrees C for melamine resin to result in uniform gloss for a decorative laminate.

It would have been obvious to one having ordinary skill in the art to have modified Min to include the press temperatures as recited because Dorries teaches the press and curing times are equal for melamine resin to result in uniform gloss for a decorative laminate.

Re claim 85: Min doesn't teach wherein the drying is carried out until a remaining water content is 7% at most, in particular at least 6%. However, because the

drying step has no water left over, It would have been obvious to one having ordinary skill in the art to have modified the combination by meeting the drying recitation since it would include zero % water and thus is carried out until a remaining water content is 7% at most.

Dorries teaches the upper limit of at least 6% because in Example 2, 800 grams of aqueous formaldehyde is used in the co-condensation product prior to drying and in a 1:2.0 ratio, which is 50%, thus this range meets the required limitations as instantly claimed. Dorries teaches a condensation product prior to pressing showing no cracks and curing of a surface having uniform gloss.

It would have been obvious to one having ordinary skill in the art to have modified Min to include the water content of at least 6% because Dorries teaches a condensation product prior to pressing showing no cracks and curing of a surface having uniform gloss.

Re claim 86: Min doesn't teach the melting range of the wax is below the drying temperature.

Recall O'Dell teaches the melting range of the wax at 66 to 144 degrees C (see 4:10-11, 4:40, 150-285 degrees F).

Dorries teaches drying temperatures at 160 degrees C in Example 2 containing a similar thermosetting composition including melamine. Doing so shows no cracks and curing of a surface having uniform gloss.

It would have been obvious to one having ordinary skill in the art to have modified the combination to include a melting range of wax below the drying

temperature because Dorries teaches the benefit of showing no cracks and curing of a surface having uniform gloss.

Re claim 87: Min doesn't teach the drying ranges as required by the claim.

Dorries teaches decorative laminates where the drying temperature range falls within about 140°C to 190°C. Dorries teaches drying at a drying temperature of 140 degrees C up to 160 degrees C. See Example 8.

It would have been obvious to one having ordinary skill in the art to have modified the combination to include the drying steps as claimed because Dorries teaches these steps result in a decorative laminate having uniform gloss.

Re claim 88: Min doesn't teach the recited temperature profile.

Doories teaches in Example 1 heating up to 180 degrees C or 140 degrees C and then cooling to 80 degrees C, see 8:30-35.

It would have been obvious to one having ordinary skill in the art to have modified the combination to have a temperature profile as claimed because Dorries teaches doings shows no cracks.

Re claim 89: Min doesn't teach a drying time is from 1 to 3 minutes.

Dorries teaches dwell times of 90 seconds, 1 and 1/2 minutes in Example 7, 60 seconds, 1 minute in Example 8 and for 3 minutes in Example 2.

It would have been obvious to one having ordinary skill in the art to have modified the combination to include dwell times as claimed because Dorries teaches benefits of uniform gloss.

Re claim 112: Min doesn't teach the drying temperature is above the melting range of the wax.

Recall O'Dell teaches the melting range of the wax at 66 to 144 degrees C (see 4:10-11, 4:40, 150-285 degrees F).

Dorries teaches drying temperatures at 160 degrees C in Example 2 containing a similar thermosetting composition including melamine. Doing so shows no cracks and curing of a surface having uniform gloss.

It would have been obvious to one having ordinary skill in the art to have modified the combination to include a drying temperature above the melting range of the wax because Dorries teaches the benefit of showing no cracks and curing of a surface having uniform gloss.

Claims 93 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0024637 to Min in view of US 4,532,170 to O'Dell, as applied to claims 5 and 84, and further in view of US 5,545,476 to O'Dell (O'Dell '476).

Re claim 93: Min doesn't teach wherein at least 90% of the hard particles have a size below 80 microns.

O'Dell '476 teaches at least 90% of the hard particles have a size below 80 microns. See 4:20-32 and 5:1-57 teaching melamine binder where alumina is the abrasion resistant particle in sizes of up to 100 microns for having wear resistance that doesn't interfere with the final product

It would have been obvious to one having ordinary skill in the art to have modified the combination to include at least 90% of hard particles as claimed because O'Dell '476 teaches this size has wear resistance that doesn't interfere with the final product.

Claim 96 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0024637 to Min in view of US 4,532,170 to O'Dell as applied to claim 5 above, and further in view of Chemical Plus data sheet.

Re claim 96: Min doesn't teach wherein the wax is a Fisher-Tropsch-Wax.

However, this wax is a particular processed wax by Fisher-Tropsch, a process that is stated by a well known name and the claim is absent from limitations to this process. Additionally, Chemical Plus data sheet states it has properties that are useful in a variety of applications including flooring such as scuff resistance. See the entire brochure.

It would have been obvious to one having ordinary skill in the art to have modified the composition of Min to include a Fisher-Tropsch wax because this process yields good results for flooring such as scuff resistance.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAMRA L. AMAKWE whose telephone number is

(571)272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Ruthkosky can be reached on 571-272-1291. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TAMRA L. AMAKWE
Examiner
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/B. H. H./
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